



## Six Frigates and the Future of Gunboat Diplomacy

by Kurt Albaugh

March was a busy month for the Navy. It supported the war against extremism in Afghanistan, led the vanguard of strikes in Libya, boarded suspicious vessels off the Somali coast, and saved life and property in Japan. A month's events couldn't augur more strongly why we need to maintain a global, flexible, versatile Navy. Even with excellent intelligence, we can't know when the Navy will be called to fight, to protect, or to save. By maintaining a widespread presence, the Navy was able to respond to the government's foreign policy objectives with gunboat diplomacy in Libya and aid to the thousands suffering in Japan.

While the Navy was doing the nation's work, congressional testimony described a bleak future. The fiscal reality of today will have a lasting effect on the Department of Defense, and the Navy, of tomorrow. Congressional Budget Office analysis shows that shipbuilding costs are expected to far outpace inflation.<sup>1</sup> Demand for naval forces is high, but as costs to provide those forces grow rapidly, the federal budget is stretched thin, and some are calling to cut the defense budget by as much as one sixth.<sup>2</sup> Even if the Navy can articulate its value to the nation and gain a higher proportion of the defense budget, the larger slice will likely come from a smaller pie. With defense budget cuts looming, the Navy should look to its own history: as our ships once more go to the shores of Tripoli, the philosophy behind the Navy's first ships offers appropriate and instructive lessons on forging American resources into the sword and shield of our republic. The original six frigates of the United States exemplify the qualities the Navy should advocate in its plan to provide the capabilities America expects in a way America can afford.

### A Historical Perspective

The original six frigates of the United States Navy were revolutionary. Their design was innovative, but so was the way that design discarded convention to balance pragmatic use of resources with the aspirations of American foreign policy. Naval advocates in the early republic were few: the arguments against a Navy were strong, and based on sober facts. As Ian Toll notes in his riveting history, *Six Frigates*, "Even proponents [of a Navy] tended to accept the judgment that the federal government, still groaning under the weight of its Revolutionary War debts, could not afford one."<sup>3</sup> Many of the questions surrounding the funding of that Navy resonate today: "Would a Navy bankrupt the country?" and, "Shouldn't America instead channel its resources and energies into internal development?"<sup>4</sup> In spite of, or perhaps due to, the

<sup>1</sup> Labs, Eric, *An Analysis of the Navy's Shipbuilding Plans*, Congressional Budget Office testimony to the House Subcommittee on Seapower and Projection Forces, March 9, 2011 (Washington, DC: U.S. Congressional Budget Office, 2011), 12.

<sup>2</sup> O'Rourke, et. al., "After the Long War: What Could Flat and/or Declining Defense Budgets Mean for Navy Plans and Programs", Conference, West 2011 Armed Forces Communications and Electronics Association and U.S. Naval Institute, San Diego, CA, January 2011

<sup>3</sup> Toll, Ian, *Six Frigates: The Epic History of the Founding of the U.S. Navy* (New York: W.W. Norton & Company, 2006), 40.

<sup>4</sup> Toll, 41.

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unfavorable budgetary environment in America's early history, the first ships of war designed and built by American hands provided an incredible amount of value for the investment.

Naval power at the turn of the Nineteenth Century consisted mainly of sailing ships armed with cannon. "First rate" ships of the line were the ultimate in naval power: large capital ships that were suited for open ocean combat. "Fifth- and sixth-rate" frigates, the smallest rated ships, played supporting roles in major engagements but excelled in security patrols and police actions. Toll notes that most major naval powers, particularly Great Britain, "[were] increasingly dominated by two types of warship: the 74-gun battleship and the 36- or 38-gun frigate."<sup>5</sup> In other words, their fleets were composed predominantly of the ends of the spectrum instead of the middle range of versatile ships.

The United States did not have the resources to fund a fleet of first-rate ships; at the same time, an affordable fleet of British style fifth- or sixth-rate ships would be unable to decisively counter the threat that spurred their construction, the Barbary States, and meet the as-yet unseen threats of the future. The types of ship used by contemporary naval powers were therefore ill-matched to the resources available to, and the strategic goals of, the United States.

The government's solution was novel: a group of ships far smaller (and faster) than a capital ship, but with more armament and sturdier construction than a fifth- or sixth-rate frigate. This heavy frigate design represented "a hybrid between the frigates and battleships of the Royal Navy."<sup>6</sup> By compromising between power and speed and emphasizing the broadest possible uses, the heavy frigates of the United States were able to:

- Respond to a wide spectrum of military operations, from combat to security and engagement.
- Distribute their force broadly to emphasize influence, or concentrate their force to emphasize power.
- Increase the likelihood of victory in battle against the likely array of smaller opponents and avoid engagements they could not win against larger opponents, building credibility to foreign powers as a successful, lasting instrument of American foreign policy.

As Toll says of the American frigate design, "She was a good open-ocean sailing ship and versatile in her uses."<sup>7</sup> Versatility meant value, which was an essential requirement of our early Navy, and demonstrates the wisdom pursued in their design and acquisition.

## ***Applying These Lessons Today***

Economic conditions today parallel those at America's founding in many important ways. Costs are rising faster than the historical average and spending must be curtailed to give priority to the nation's debts. As Commander Bryan Clark and Dr. Dan Whiteneck noted in *Proceedings*, "the United States may have to fundamentally change what it expects from seapower. Some missions or platforms may be left behind to protect the nation's most vital maritime

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<sup>5</sup> Toll, 50.

<sup>6</sup> Ibid.

<sup>7</sup> Toll, 48.

capabilities.”<sup>8</sup> As at the turn of the Nineteenth Century, the United States cannot provide everything it wants for a Navy from which it needs much.

We know what these needs are. The Navy needs to be global: conducting simultaneous operations in multiple regions. It needs to be scalable: as a foreign policy tool, it needs to be ready for combat, but also prepared to excel at an array of more frequent missions including security, engagement, and relief and reconstruction.<sup>9</sup> In other words, the Navy “must continue to deter adversaries, stop aggression, and reassure allies.”<sup>10</sup> As in Libya and Japan, mission requirements change quickly and cannot be fully anticipated.

Our current shipbuilding plan to meet these needs has many features, but two deserve focus: the nuclear aircraft carrier and the littoral combat ship (LCS). The aircraft carrier is the modern equivalent of the first-rate battleship. Their capabilities are hugely impressive, as are their costs. They are ideal for sustained strike warfare but, from a cost perspective, they are inefficient for other common roles such as security, engagement, and relief. The LCS is analogous to the fifth- and sixth-rate frigates – they are relatively cheap, and can be distributed globally, but their capabilities are weak. Even if grouped in large numbers, they would be poorly suited for major fleet actions. In many ways, the United States’ acquisition strategy looks much like those of European navies at the turn of the Nineteenth Century. It is instructive to remember that “The French Revolution had been preceded by a major financial crisis brought about, in large part, by the cost of the *ancien régime*’s vast naval establishment.”<sup>11</sup> The US Navy, under its current plan, will end up with a lot of high-end capability and cost, and a lot of low-end capability without much value for the price.

Whether the nation can even maintain 11 carrier strike groups is in question, as Congressional Budget Office reports estimate that the Navy’s current shipbuilding plan, which would maintain 10-11 carriers, will be approximately twenty percent more costly than Navy estimates.<sup>12</sup> Assuming a fixed-cost budgetary structure, the Navy will have to procure fewer aircraft carriers, and the ability to provide consistent global strike capabilities would begin to degrade.

If we build 49 littoral combat ships, as in the 2011 Navy Shipbuilding Plan, they will pad the number of hulls in the water – but they will be hard-pressed to reassure allies and deter adversaries when those missions are largely tied to capabilities the LCS does not have: long-range strike and ballistic missile defense. At roughly \$600 million apiece, the whole class will cost nearly thirty billion dollars over a roughly same period of years – for what capability?

Adopting an acquisition strategy informed by the early US Navy would favor neither the aircraft carrier nor the LCS. It would favor a generous number of highly capable, adaptable, affordable platforms. During the Barbary Wars, the American heavy frigate met those goals; what might the modern equivalent look like?

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<sup>8</sup> Clark and Whitehead, “Strategic Choices at the Tipping Point,” *Proceedings* February (2011), <http://www.usni.org/magazines/proceedings/2011-02/strategic-choices-tipping-point> (accessed March 28, 2011).

<sup>9</sup> Addison, Victor, “The Answer is the Carrier Strike Group...Now, What was the Question?” *Proceedings* July (2010), <http://www.usni.org/magazines/proceedings/2010-07/answer-carrier-strike-group-now-what-was-question> (accessed March 28, 2011)

<sup>10</sup> Clark and Whitehead.

<sup>11</sup> Toll, 42.

<sup>12</sup> Labs, 8.

## **One Powerful Legacy**

The United States has a class of ship today nearly equivalent to the *Constitution* and her sister ships: the Arleigh Burke-class destroyer. Smaller than a modern capital ship, the class nonetheless contains an incredible amount of combat capability: the Aegis combat system, Tomahawk cruise missiles, surface and undersea weapons, and in many cases, ballistic missile defense capability. Operating independently, they can conduct a variety of missions in high-threat environments where carriers need many escorts and where the LCS is vulnerable. Moreover, their mature design allows more ships to be purchased at a comparatively lower cost, ensuring that potent capability can be distributed on a global scale.

While operating globally, guided missile destroyers provide easily scalable combat power. During periods of low threat, they can fulfill missions like counter-piracy and theater engagement. If a small war needs to be fought with a low logistical and political footprint, as in Libya, two or three Burkes can fulfill this requirement. This idea was proposed in 1990 when then-Lieutenant Commander Stavridis said that small groups of Aegis ships “would provide an easily tailored, relatively less resource-intensive alternative to a full-blown carrier or battleship strike group.”<sup>13</sup> Beyond small wars that are hard to anticipate but likely to occur, a larger group of destroyers can provide capability in all warfare areas for fleet engagements.

If the Navy pursues a fleet composition that further emphasizes the Aegis destroyer, there would be many implications for the design of the next major series of Arleigh Burkes, the Flight III, which will be funded in 2016 according to current plans.<sup>14</sup> The Flight III Burke is already intended to significantly improve some capabilities, including the more advanced Air and Missile Defense Radar (AMDR) in the place of the current SPY-1D radar. In keeping with the idea of a “hybrid” between capital ships and small combatants, the Flight III should be larger and more heavily armed than its predecessors, an idea proposed to congress in 2009.<sup>15</sup> Larger size would allow the few remaining gaps in its versatility to be filled. Some important additions could be:

- Flag/staff command facilities
- 11 meter rigid hull inflatable boats (RHIBs) with radar for missions like counter-piracy (an upgrade from the 7 meter RHIBs with limited on-board navigation capabilities)
- A hybrid-electric drive similar to that used in the USS *Makin Island* (LHD 8), which could reduce fuel consumption by sixteen percent and require less frequent replenishment<sup>16</sup>
- More small-caliber weapons like the Mk 38 Mod 2 remote controlled machine gun

Staff facilities are important, as destroyers are already being used in a flagship role, as when USS *Farragut* (DDG 99) embarked a large Singaporean staff during its service as

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<sup>13</sup> Stavridis, et. al., “Aegis and the Third World,” *Proceedings* September (1990),

<http://www.usni.org/magazines/proceedings/1990-09/aegis-and-third-world> (accessed March 28, 2011)

<sup>14</sup> Senate Armed Services Committee, *FY2012 Navy Posture Statement: Testimony from Chief of Naval Operations Admiral Gary Roughead* (Washington, DC: U.S. Government Printing Office, 2011), 10-11.

<sup>15</sup> O'Rourke, Ronald, *Navy DDG-51 and DDG-1000 Destroyer Programs: Background and Issues for Congress* (Washington, DC: U.S. Government Printing Office, 2009), 25-55.

<sup>16</sup> Ibid.

Combined Task Force 151 flagship.<sup>17</sup> Assuming intelligently designed facilities, space for staff could easily be reconfigured to carry additional stores to further increase the ship's logistical endurance, supplies for humanitarian relief, or other mission-specific assets like unmanned vehicles.

Critics may argue that emphasizing destroyer production in this way will still increase costs and merely represents parochialism by Aegis advocates. While enhanced Flight III destroyers will be significantly more expensive, they will provide a higher value for the cost than other programs which are either less financially efficient or less strategically capable. In addition, the Arleigh Burke class is a proven design with lower technical risks and would be cheaper to modify: non-recurring design costs for a Flight III are estimated by the Congressional Research Service to be in the hundreds of millions, rather than billions, of dollars.<sup>18</sup> Even at increased cost, the Navy could purchase five or six enhanced Flight III Burkes for the same cost as one of the planned class of aircraft carrier.<sup>19</sup> The Navy would realize savings in another way, as a cost-equivalent number of destroyers would require thousands fewer crew than an aircraft carrier, not accounting for yet unplanned design modifications that could automate certain crew functions and further lower manpower requirements. Beyond lower design, construction, and manning costs, building more Arleigh Burkes would take advantage of economies of scale, realizing further savings.

Critics would also point to the aircraft carrier as a symbol of American might – the awe-inspiring messenger of American combat power. This notion, however, is a double-edged sword. Carriers are symbols to our enemies, but they are to the American public as well. If ever one was successfully attacked, how much confidence would be lost in the Navy? How much of America's financial investment would be neutralized through a mission kill on a carrier? Smaller platforms distribute the risks as well as the costs, and carry less symbolic vulnerability than a capital ship.

The United States still needs the unique capabilities of the aircraft carrier, but their current force level, and therefore ability to project power across the globe, may simply be unsustainable. Their combat power is awesome and as they are a symbol of national pride and power: even a small reduction in the carrier force is an emotionally charged decision that will be hard for lawmakers, Navy leadership and the American public to accept. However, the Navy has a responsibility to provide strategic value to the citizenry it protects, and as a professional group to provide expert opinion on strategic probabilities, whether they are attractive or not. At this point, we cannot assume that effective advocacy for the Navy will cause it to be funded at a higher level. Our maritime strategy "suggests a larger future force in terms of hulls in the water."<sup>20</sup> Assuming likely funding levels, in order to achieve larger numbers we need to build smaller ships. Those ships should provide force along every stage of military escalation, not just low-level police actions, and provide combat power at an affordable cost.

Sir Michael Howard said, "In structuring and preparing an army for war, you can be clear that you will not get it precisely right, but the important thing is not to be too far wrong, so that

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<sup>17</sup> Combined Maritime Forces Public Affairs, "Combined Maritime Forces Flagship Intercepts Somali Pirates," *Navy News Service*, April 2, 2010, [http://www.navy.mil/search/display.asp?story\\_id=52370](http://www.navy.mil/search/display.asp?story_id=52370) (accessed March 28, 2011)

<sup>18</sup> O'Rourke, 56.

<sup>19</sup> Labs, 14.

<sup>20</sup> Hendrix, Henry, "Buy Fords, Not Ferraris," *Proceedings* April (2009), <http://www.usni.org/magazines/proceedings/2009-04/buy-fords-not-ferraris> (accessed March 28, 2011)

you can put it right quickly.”<sup>21</sup> We can’t perfectly forecast the Navy our country will need in the coming decades, but we can start with some confidence: the Navy will need to be globally distributed, thrifty, and able to sail confidently through dangerous waters. Two centuries ago, the *Constitution* and her sister ships possessed a powerful balance of force and economy in the past, and the Arleigh Burke-class destroyer does so today. A descriptive, not prescriptive, examination of resources and requirements favors versatility, proven combat systems, and lower costs. Instead of saying that we should be funded for eleven aircraft carriers – we should ask – how can we provide the strongest defense with the resources we have?

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<sup>21</sup> Howard, Michael, quoted in Yingling, Paul, “A Failure of Generalship,” *Armed Forces Journal* May (2007) , <http://www.armedforcesjournal.com/2007/05/2635198> (accessed March 30, 2011)